

**Work Order ID 67940**

Page 1

Tuesday, April 05, 2011 10:03:32 AM

Item ID: D350-636-016

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date: 1104-5 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4168	A								
IIN-D350-636	H								

100

0.00



DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy blue file and type labels per PPP D350-636-016 CHG 001

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

**Memo**

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D4168

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr, section R-R

4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting, section R-R

5- Drill fwd step holes using DT9616. Ensure proper positioning. All holes as per dwg D4168 Detail J

6- Drill pilot holes as per Dwg D4168 sheet 5 (D4168-2 details). Drill using drill Jig DT8150 &amp; DT8863A for first side only DT8863B for second side (detail K)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail K.  
\*\*\*SECOND SIDE\*\*\*

8- Drill most FWD wearplate hole using DT9678 locating of 66.54" hole

9- Open up holes of Detail J to 0.297" (total of 2 holes per side) + .201 iplace per side and open holes of detail M section R-R to 0.500" as per dwg D4168

10- Weld D2744 Cap as per Dwg D4168 and QSI 004. Fill grooves in bend left from bending as per QSI 004

A/R Aluminum Rod batch: ML16577

BE 11/04/07

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Grind welds flush as per Dwg D4168

11-4-7

120

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140  HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1  Memo	0.00  0.00		11-4-8					
150  QC Quality Control	QC3- Inspect Part Finish  Memo	0.00  0.00				1		8640/08	

W/O:		WORK ORDER CHANGES					
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Required Date: 4/8/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

**Memo**

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side)  
as per dwg D4168.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side)  
as per dwg D4168.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes of Detail K,L, ground handling and float holes per dwg D4168  
(welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐ ☐ Sikaflex-291

batch: 11/04/08

exp. date 12/01/10

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D4168 & QSI004  
(welding instructions on sheet 8)

A/R ☐ ☐ Aluminum Rod

batch: M116577

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D4168

BE 4/04/08

BB 11/04/08

BE 11/04/11

BB 11/09/12

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Spot face ground handling holes section (total of 4 places per side) as per  
dwg D4168

12- C'bore section CH-CH

13- Deburr holes

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

11-04-12

11-4-12

11 04 13 ①

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Pressure Wash per QSI005 4.3	0.00							
	HandFinish	0.00				1		BR 11-4-13	
	Hand Finishing								
	Memo								
	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
200	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
	Powdercoat	0.00				1		BR 11-4-13	
	Powder Coating								
	Memo								
	START TIME: 2:45								
	OVEN TEMPERATURE: 320								
	FINISH TIME: 3:15								
210	QC3- Inspect Part Finish	0.00							
	QC	0.00				1		φ 11/04/14	
	Quality Control								
	Memo								
	Inspect for foreign object per QSI 024								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

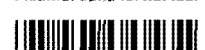
Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

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220

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

✓ 1- Install inserts as per Dwg D4168

11/04/11

230

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

✓ 1-Inspect for Foreign Objects

✓ 2-Spray inside of tube with "LPS-3" batch: NA

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D4168

SIKA FLEX 241

BATCH: 1116198EXP DATE: 12/014-assemble o-ring to plug as per dwg D3492 and apply o-ring lube  
A/R 55-o-ring lube batch: 11141845-Coat all exposed fasteners with "LPS Procyon" batch: 1114356

11/04/11

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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
250	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control	*****ensure antiseize is on AN8C21A bolts*****								

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-636-016								
	Location: _____								
	PPP rev: _____								
280		0.00							
	QC21- Final Inspection - Work Order Release								
QC	Memo	0.00							
Quality Control									

11/4/18  
MF  
11-04-18

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# Picklist Print

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Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH




Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP rev:A 10.09.28 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3490-1  Cross Bolt Spacer		Manufactured	No			160	Each	31.0000	4	4			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG001</div> <div>31</div> <div></div> </div>													
<div> <div>62450</div> <div>31</div> <div></div> </div>													
D3490-3  Cross Bolt Spacer		Manufactured	No			160	Each	37.0000	4	4			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>LG001</div> <div>37</div> <div></div> </div>													
<div> <div>63556</div> <div>8</div> <div></div> </div>													
<div> <div>66968</div> <div>29</div> <div></div> </div>													
8 AN3C34A  BOLT		Purchased	No			230	Each	20.0000	1	1			
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
<div> <div>ST353</div> <div>20</div> <div></div> </div>													
<div> <div>116003</div> <div>20</div> <div></div> </div>													

BE 11/04/11  
B-67773-3

BE 11/04/11

716003

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Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00


AN3C36A Purchased No 230 Each 209.0000 4 4  
  
 BOLT

Location	Loc Qty	Loc Code
FG	14	
101261	4	
116590	10	
FP-B	71	
<u>111925</u>	71	x4
ST303	24	
116381	2	
116590	22	
ST353	100	
117125	100	

8 AN3C37A Purchased No 230 Each 0.0000 1 1  
  
 BOLT

8 AN3C42A Purchased No 230 Each 60.0000 1 1  
  
 BOLT

Location	Loc Qty	Loc Code
ST354	60	
106176	60	106176

D3488-042 Manufactured No 230 Each 17.0000 1 1  
  
 Blade Fitting Assembly, RH

Location	Loc Qty	Loc Code
FP008	17	
59643	1	
<u>62003</u>	8	x1
65099	8	

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, April 05, 2011 10:03:39 AM

Work Order ID: 67940

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

D3492-1	Manufactured	No	230	Each	0.0000	8	8
Plug							
D3492-3	Manufactured	No	230	Each	0.0000	8	8
Plug							
D3873-1	Manufactured	No	230	Each	177.0000	7	7
Bushing							

Location	Loc Qty	Loc Code
ST088	177	
64567	77	
64760	100	

D4154-041	Manufactured	No	230	Each	2.0000	1	1
Wearplate Assembly							

Location	Loc Qty	Loc Code
FP009	2	
65092	2	

D4170-1	Manufactured	No	230	Each	38.0000	4	4
Bushing							

Location	Loc Qty	Loc Code
LG	4	
63322	4	
LG002	34	
65912	23	
66158	11	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, April 05, 2011 10:03:39 AM

Work Order ID: 67940



Parent Item: D350-636-016



Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

D4171-1  
  
 Bushing

Manufactured No

230 Each

16.0000

1

1



*Handwritten: 4/8 11/04/11*

Location

Loc Qty

Loc Code

ST135

16

65646

16

*Handwritten: X1*

MS21043-3

Purchased No

230 Each

1,072.000

5

5



*Handwritten: 4/8 11/04/11*

Nut

Location

Loc Qty

Loc Code

FG

80

103691

80

FP-B

16

112314

16

ST301

976

112314

976

*Handwritten: X5*

NAS1149C0363R

Purchased No

230 Each

4,848.000

9

9



*Handwritten: 4/8 11/04/11*

Washer

Location

Loc Qty

Loc Code

ST297

4848

113889

79

114742

4769

*Handwritten: X9*

NAS1515H3L

Purchased No

230 Each

341.0000

4

4



*Handwritten: 4/8 11/04/11*

WASHER

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

301

113362

301

*Handwritten: X4*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, April 05, 2011 10:03:39 AM

Page 5

Work Order ID: 67940



Parent Item: D350-636-016



Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

194.0000

8

8



O-RING



all 11/04/14 PTO =>

Location

Loc Qty

Loc Code

FP-A

194

110915

147

115589

47

NAS1611-013

Purchased

No

230

Each

208.0000

8

8



O-RING



all 11/04/14

Location

Loc Qty

Loc Code

FP

200

117291

200

FP-A

8

116582

8

AN960JD816

Purchased

No

250

Each

73.0000

2

2



1/2" washer, Alum



all 11/04/14

Location

Loc Qty

Loc Code

FP-A

73

106043

73

D2744

Manufactured

No

110

Each

47.0000

1

1



Cap



BE 11/04/07

Location

Loc Qty

Loc Code

LG002

47

62715

18

65086

29

Tuesday, April 05, 2011 10:03:40 AM

Shop Packet Print

Page 5

W/O: 6740		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/04/14	230	Replace and Assemble with D2594-3 / M165618 Permanent change! Done on prev. wo [Signature]	JW	11/04/14	X8		

Part No: D350-636-016 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, April 05, 2011 10:03:40 AM

Page 6

Work Order ID: 67940

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No



Extrusion Bent

*B66874*

110

Each

9.0000

1



*DP 11-4-6*

Location

Loc Qty

Loc Code

LG

9

66875

9

160

Each

33.0000

8



8

D2743

Manufactured No



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG001

33

64003

33

160

Each

8.0000

1



1

*BE 11/04/11  
B67766 8*

D2739

Manufactured No



350 I Beam

Location

Loc Qty

Loc Code

LG

8

66981

8

230

Each

1,305.000

4



4

ALS4-1032-225

Purchased

No



Insert

Location

Loc Qty

Loc Code

FP-B

224

110768

224

ST282

1081

110768

1081

*1 BB 11/04/08*

*22 11/04/14*

*x4*

Tuesday, April 05, 2011 10:03:40 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, April 05, 2011 10:03:40 AM

Page 7

Work Order ID: 67940

Parent Item: D350-636-016


Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011


Start Qty: 1.00

Required Qty: 1.00

AN8C35A Purchased No 230 Each 44.0000 1 1  
  
 BOLT


Location	Loc Qty	Loc Code
FP-A	44	
115188	3	
115960	18	
116874	23	

*Handwritten:* 11/04/14

AN6C44A Purchased No 230 Each 54.0000 4 4  
  
 BOLT

Location	Loc Qty	Loc Code
FG	2	
103964	2	
FP-B	2	
115936	2	
ST344	50	
116874	50	

*Handwritten:* 11/04/14

MS21083C8 Purchased No 230 Each 83.0000 1 1  
  
 NUT

Location	Loc Qty	Loc Code
FP-B	13	
115884	13	
ST303	70	
115884	0	
117010	20	
117291	50	

*Handwritten:* 11/04/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, April 05, 2011 10:03:40 AM

Work Order ID: 67940



Parent Item: D350-636-016



Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

D3631-1  
Washer  
Manufactured No

230 Each 108.0000 8 8



*all u/loc/1x*

Location Loc Qty Loc Code

FP-A 8

63647 8

ST072 100

66959 100

AN960C10L  
Washer  
Purchased No

NAS1149C0332  
R

230 Each 0.0000 4 4



washer

*1117291*



*(x4) all u/loc/1x*

D2745  
Bushing  
Manufactured No

230 Each 64.0000 8 8



Bushing

*11*



*all u/loc/1x*

Location Loc Qty Loc Code

FP-A 23

63315 23

ST021 41

63315 41

AN960C816L  
Washer  
Purchased No

230 Each 0.0000 1 1



WASHER NAS1149C0832R M114915



*(x1) all u/loc/1x*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, April 05, 2011 10:03:41 AM

Page 9

Work Order ID: 67940

Parent Item: D350-636-016

Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

280.0000

4

4



BOLT



*ul* *uloc1g*

Location

Loc Qty

Loc Code

FP-A

45

111982

45

ST351

235

111982

10

116419

75

116549

50

116704

100

*ul*

MS21043-6

Purchased

No

230

Each

583.0000

4

4



NUT



*ul* *uloc1u*

Location

Loc Qty

Loc Code

FG

20

103693

20

FP-A

88

112314

88

ST301

475

112314

475

*ul*

D3493-1

Manufactured

No

250

Each

61.0000

2

2



Washer



*ul* *uloc1u*

Location

Loc Qty

Loc Code

ST062

61

62677

21

66975

40

*66975*

Tuesday, April 05, 2011 10:03:41 AM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, April 05, 2011 10:03:41 AM

Page 10

Work Order ID: 67940



Parent Item: D350-636-016



Parent Item Name: Skidtube STD w/ Training Wearplates, RH

Start Date: 4/4/2011

Required Date: 4/8/2011

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased No

250 Each

83.0000

2 2



NUT



*Handwritten:* 11/04/13

Location

Loc Qty

Loc Code

FP-B

13

115884

13

ST303

70

115884

0

117010

20

117291

50

*Handwritten:* X2

AN8C21A

Purchased No

250 Each

56.0000

2 2



BOLT



*Handwritten:* 11/04/13

Location

Loc Qty

Loc Code

ST345

56

116381

56

*Handwritten:* X2

D2741

Manufactured No

250 Each

66.0000

1 1



*Handwritten:* 11/04/14

Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST466

66

61341

26

63589

40

*Handwritten:* X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D4168-041	350 SKIDTUBE ASSEMBLY, LH
	X			D4168-042	350 SKIDTUBE ASSEMBLY, RH
		X		D4168-043	350 SKIDTUBE ASSEMBLY, LH
			X	D4168-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1		1		D3498-041	BLADE FITTING, LH
	1		1	D3498-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
8	8	8	8	D3631-1	WASHER
7	7	7	7	D3873-1	BUSHING
1	1	1	1	D4154-041	WEARPLATE ASSEMBLY
1				D4168-1	SKIDTUBE WELDMENT, LH
	1			D4168-2	SKIDTUBE WELDMENT, RH
		1		D4168-3	SKIDTUBE WELDMENT, LH
			1	D4168-4	SKIDTUBE WELDMENT, RH
4	4	4	4	D4170-1	SPACER
1	1	1	1	D4171-1	BUSHING
4	4	4	4	ALS4-1032-225	INSERT
4	4	4	4	AN3C6A	BOLT
1	1	1	1	AN3C34A	BOLT
4	4	4	4	AN3C36A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
9	9	9	9	AN960C10	WASHER (OR NAS1149CO363R)
4	4	4	4	AN960C10L	WASHER (OR NAS1149CO332R)
1	1	1	1	AN960C816L	WASHER (OR NAS1149CO832R)
5	5	5	5	MS21043-3	NUT
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 67946  
P/11-04-5

#### GENERAL NOTES:

- MATERIAL: MAKE D4168-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:  
CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.  
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D4168-041/-042/-043/-044 = 32.3 LBS
- WELD PER DART QSI 004
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:  
MINIMUM YIELD TENSILE STRENGTH = 35 KSI  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

RELEASED  
2010-09-15

A		NEW ISSUE		SC	10.08.09
REV.	DESCRIPTION			BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC.			
DRAWN	SC	PORT HADLOCK, WA			
CHECKED		DRAWING NO.	REV. A	SHEET 1 OF 11	
MFG. APPR.		D4168			
APPROVED		TITLE	SCALE		
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS		
DATE	10.08.09	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>			

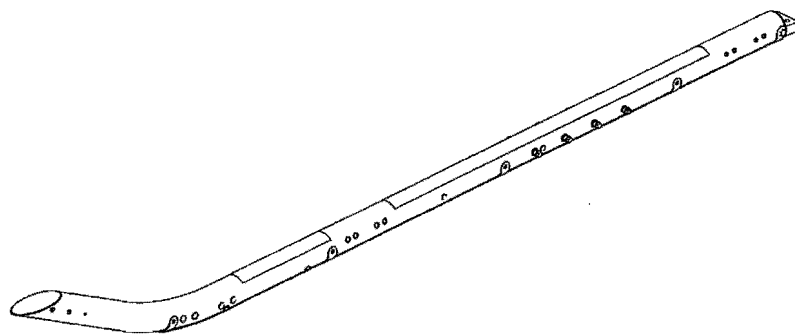
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

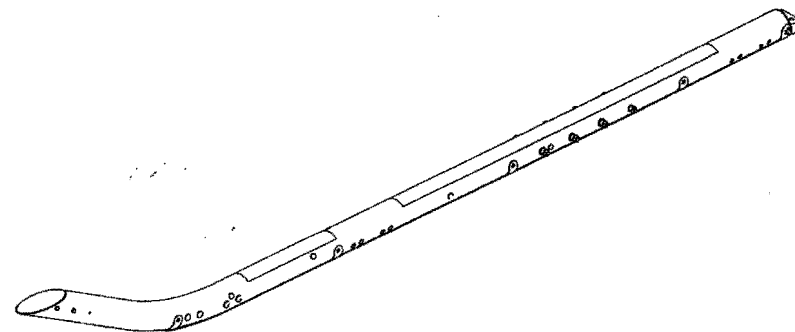
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4168-041 350 SKIDTUBE ASSEMBLY, LH**



**D4168-042 350 SKIDTUBE ASSEMBLY, RH**

*u1062940*

**RELEASED**  
2010-03-15  
JW

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
DRAWN	SC		
CHECKED	SC	DRAWING NO. <b>D4168</b>	REV. A
MFG. APPR.	<i>[Signature]</i>		SHEET 2 OF 11
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>350 SKIDTUBE ASSEMBLY</b>	NTS
DATE	<b>10.08.09</b>	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

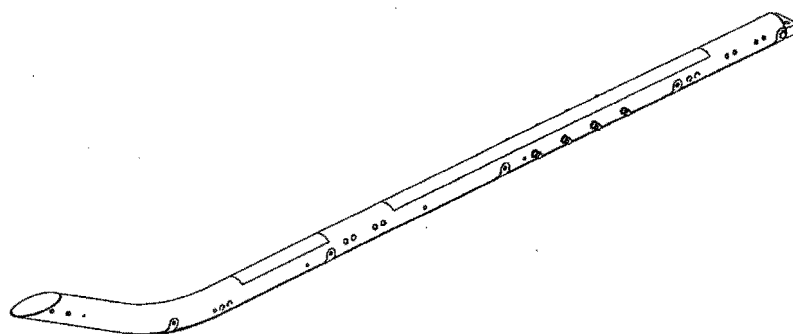
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

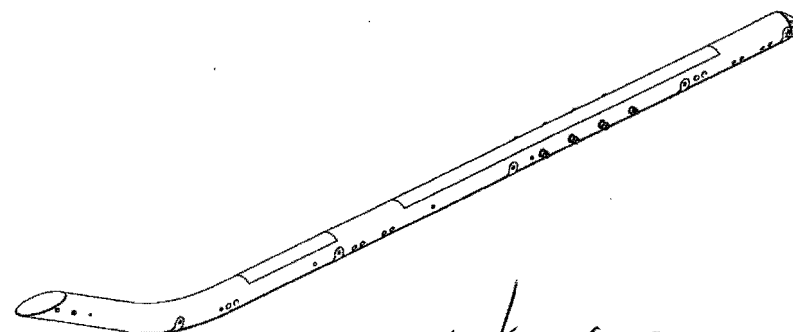
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**D4168-043 350 SKIDTUBE ASSEMBLY, LH**



**D4168-044 350 SKIDTUBE ASSEMBLY, RH**

*W6 679410*

**RELEASED**  
2010-09-15

DESIGN	SC	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO. <b>D4168</b>	REV. A
MFG. APPR.	<i>[Signature]</i>	SHEET 3 OF 11	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.		<b>350 SKIDTUBE ASSEMBLY</b>	NTS
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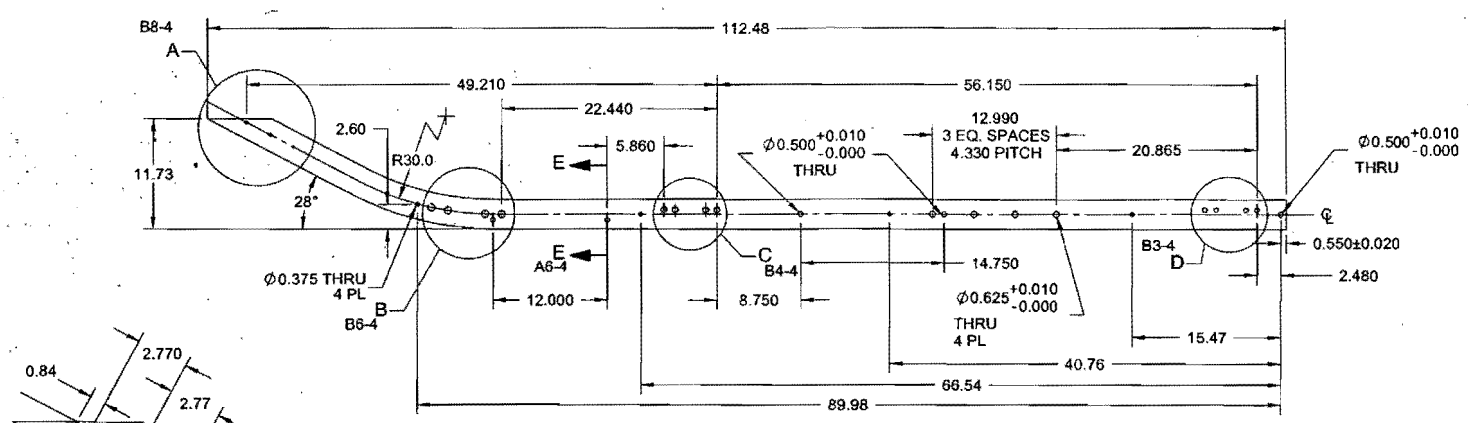
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

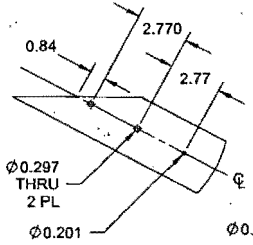
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

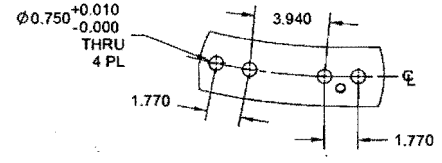
**NOTE:** Date & initial all entries



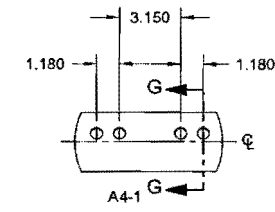
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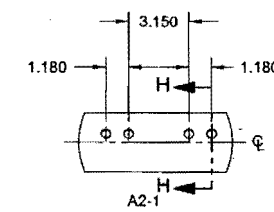
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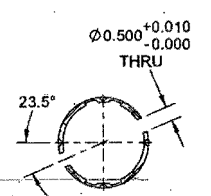
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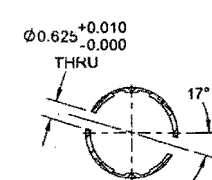
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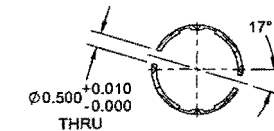
**DETAIL D**  
SCALE 2X



**SECTION E-E**  
SCALE 3X, 2 PL



**SECTION G-G**  
SCALE 3X, 4 PL



**SECTION H-H**  
SCALE 3X, 4 PL

*u 667940*

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

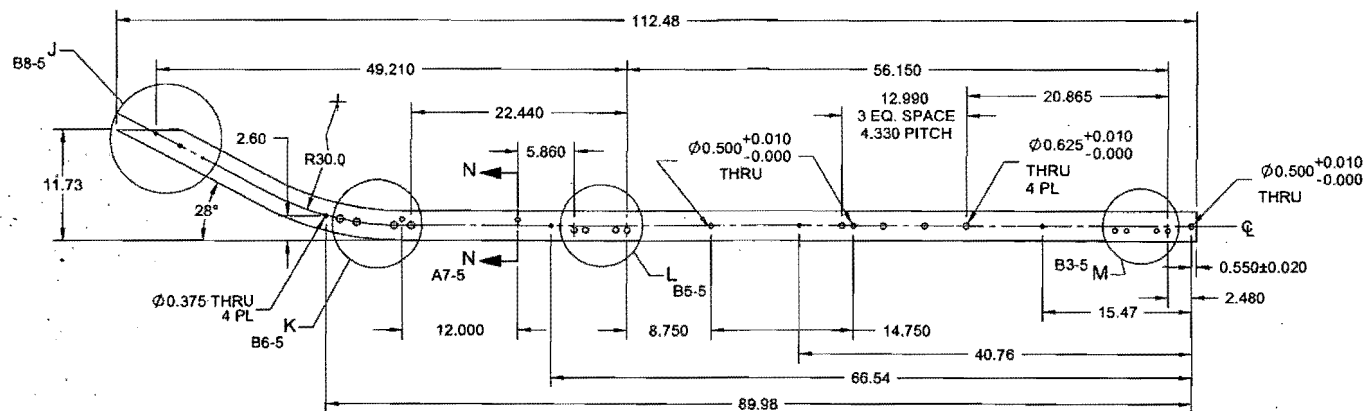
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

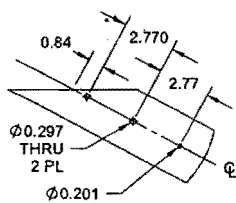
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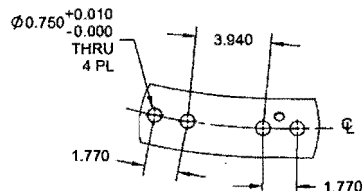
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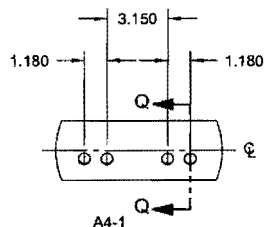
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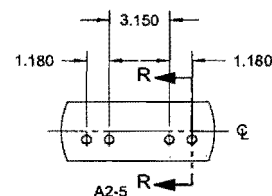
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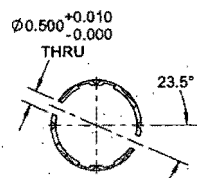
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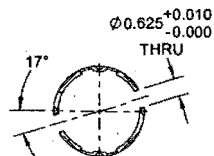
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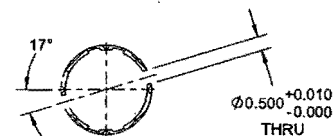
**DETAIL M**  
SCALE 2X



**SECTION N-N**  
SCALE 3X, 2 PL



**SECTION Q-Q**  
SCALE 3X, 4 PL



**SECTION R-R**  
SCALE 3X, 4 PL

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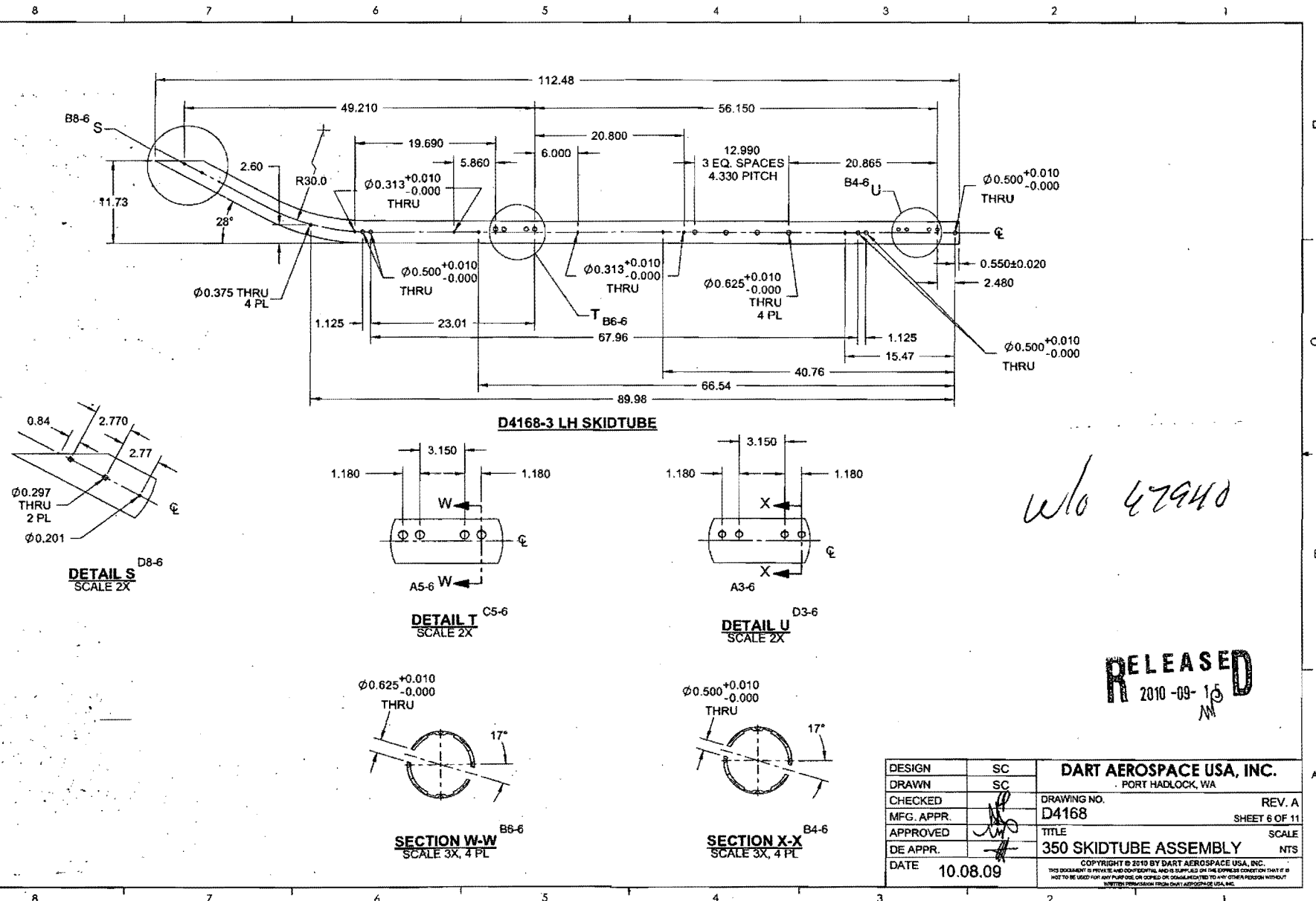
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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D

D

C

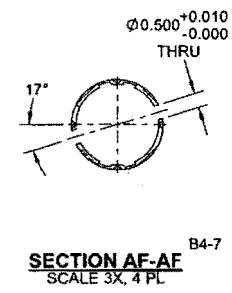
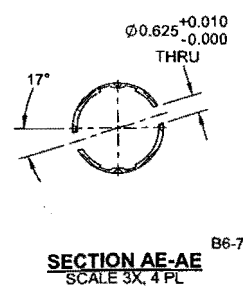
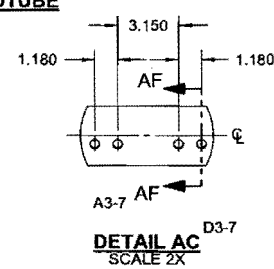
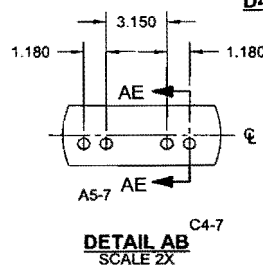
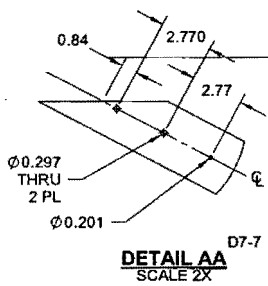
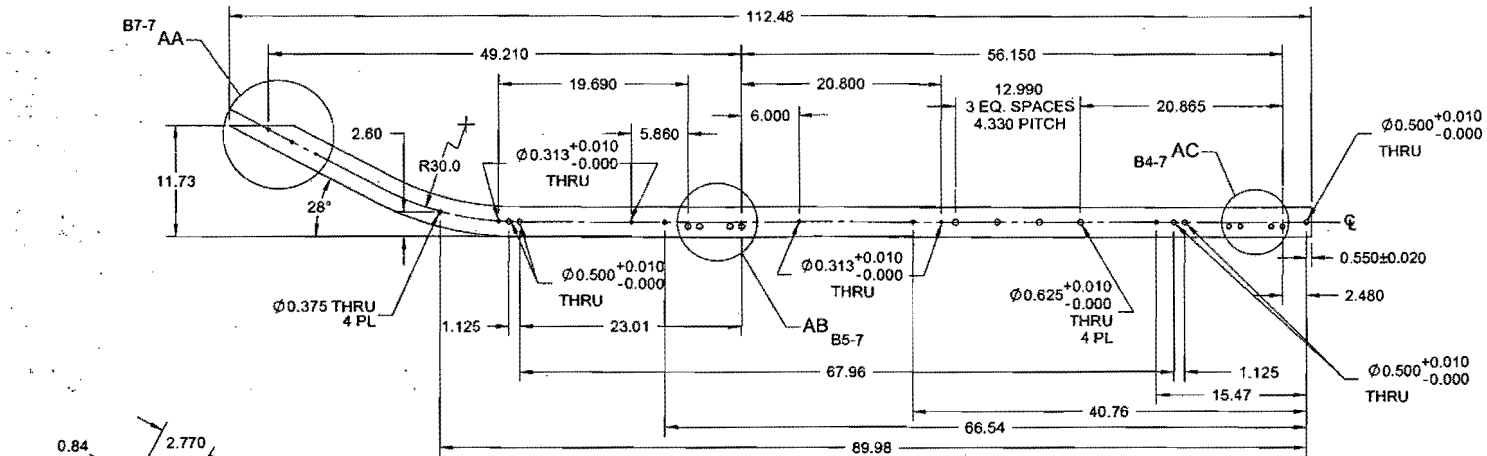
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B

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A

A



*w/o 62948*

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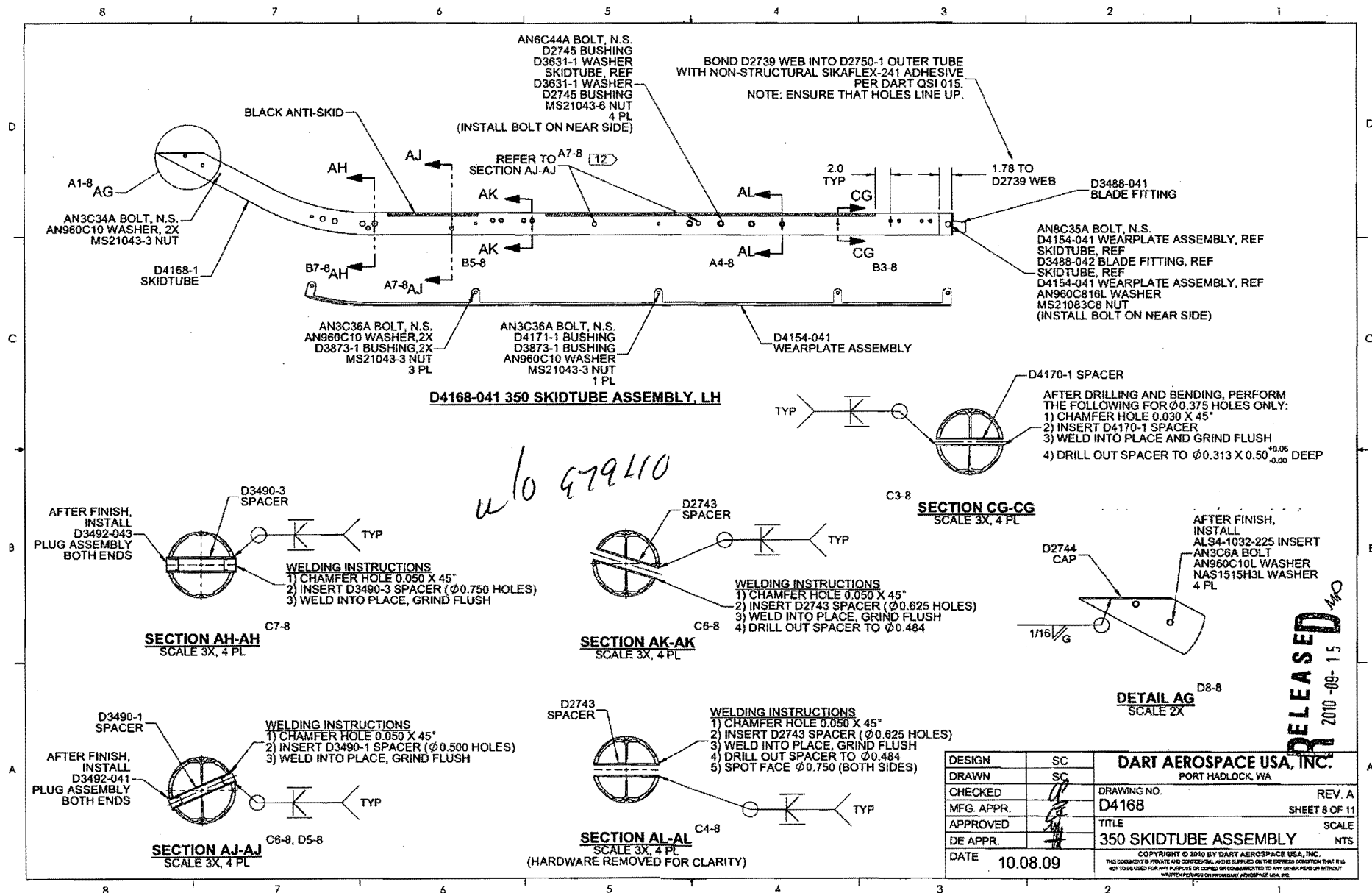
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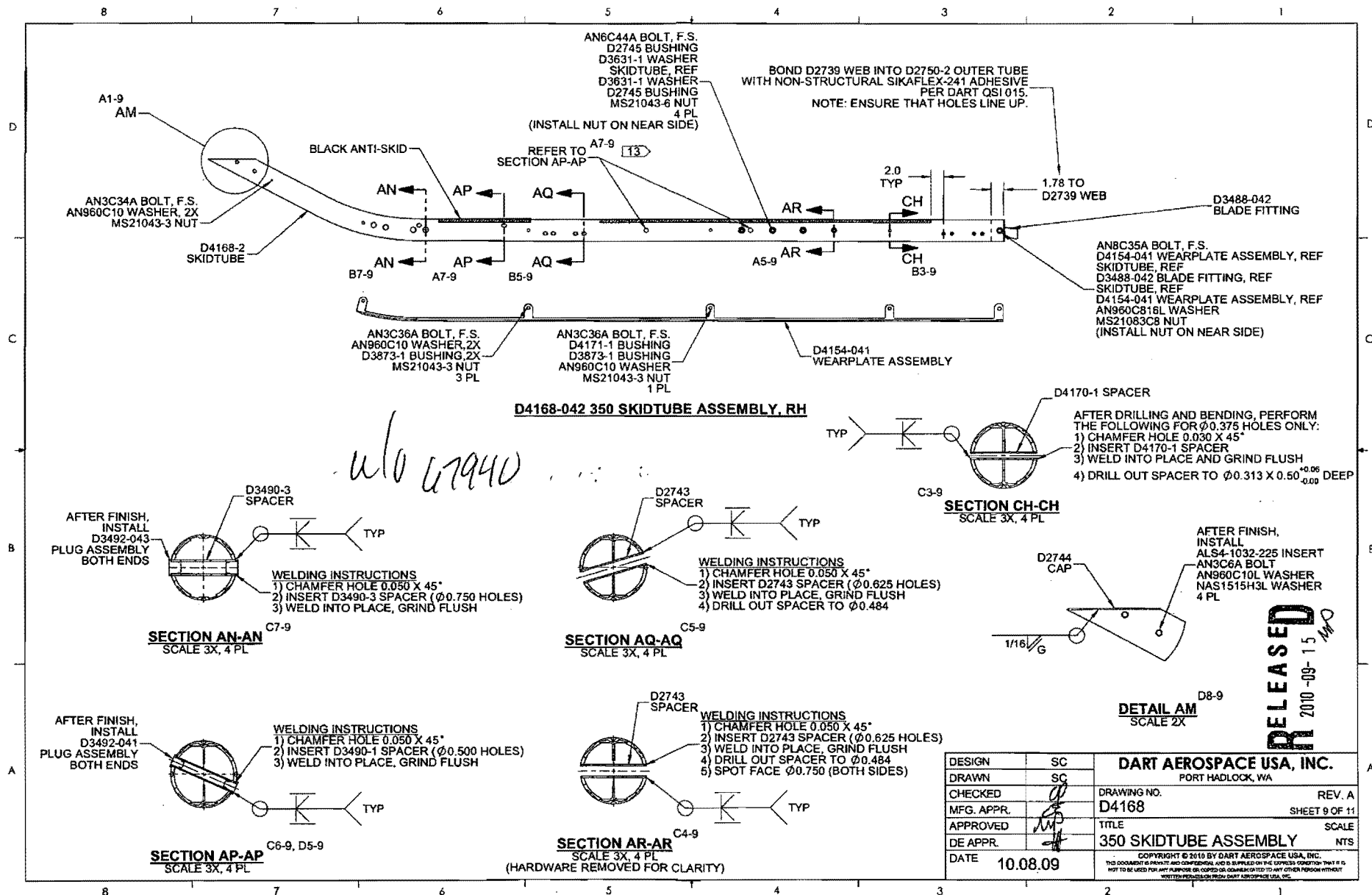
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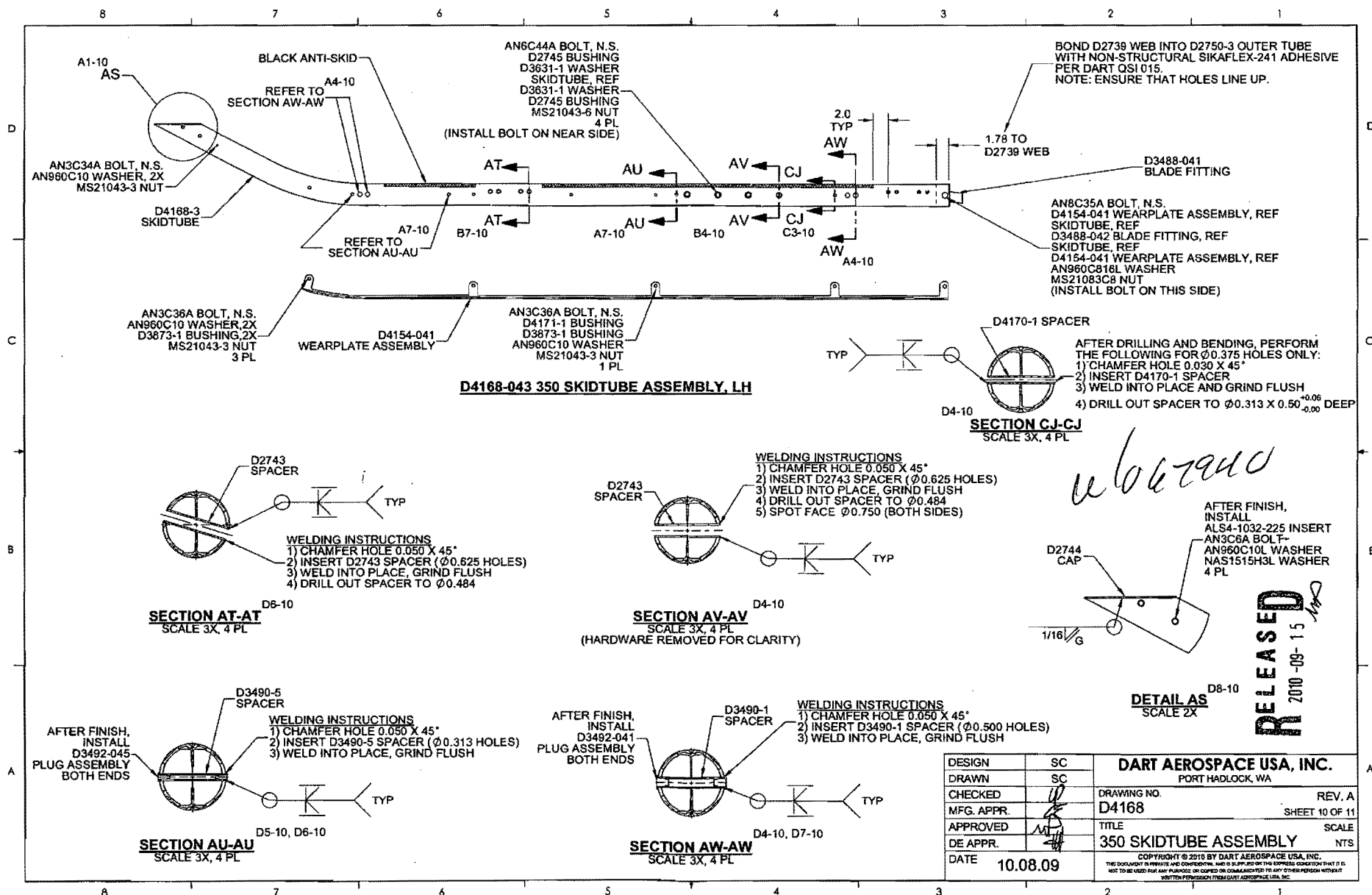
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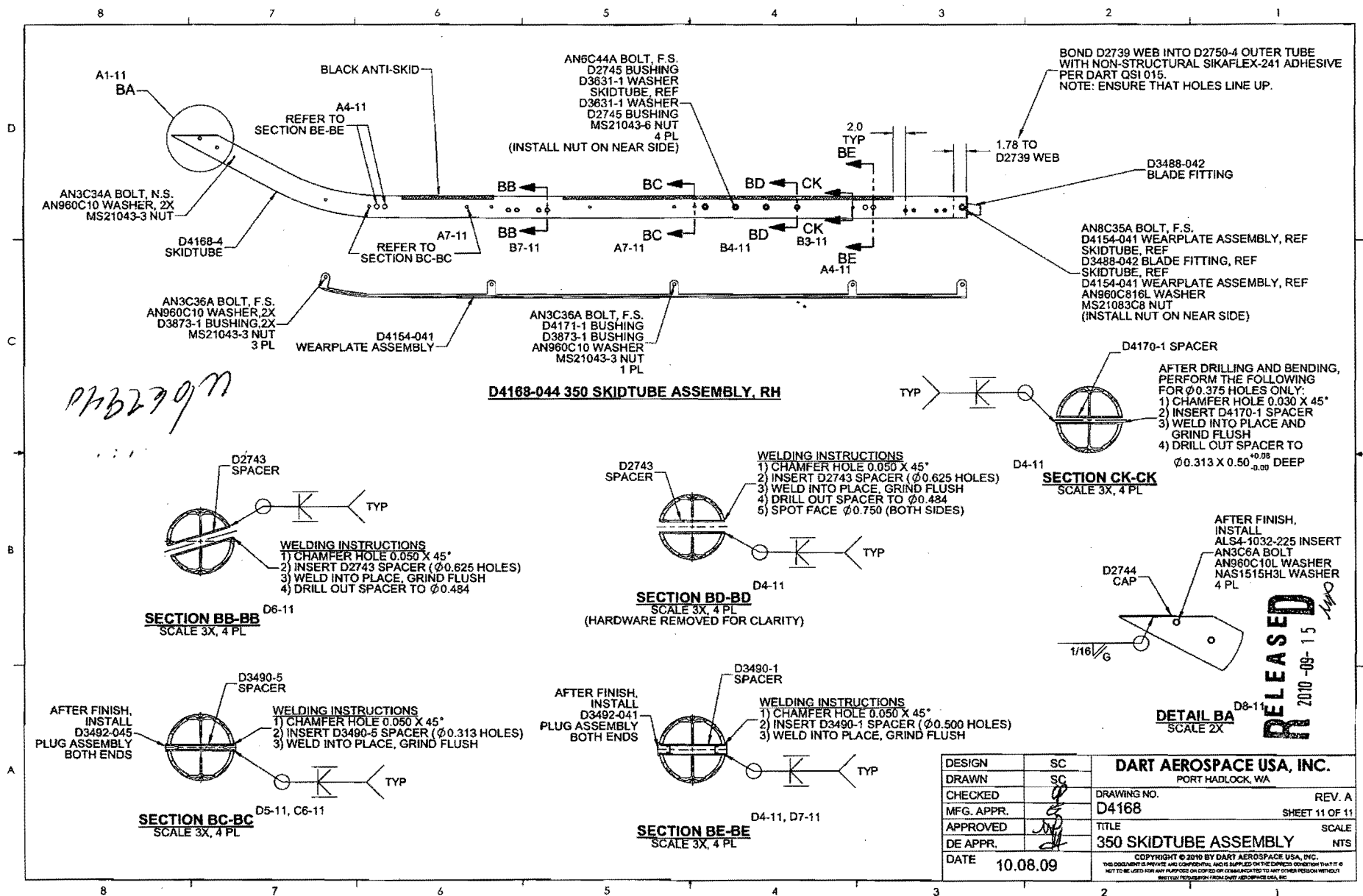
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